

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-014422**Date Inspected:** 27-May-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** An Qing Xiang.**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Shailesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

**BAY 10**

This QA Inspector performed randomly Visual Inspection and Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6028 (MT) report for this date. The member is identified as skirt plate and North tower lift 4 D/E corner seam (Except double diaphragm) from inside. The weld designations reviewed are as follows.

ND1-A501E/E-39,  
SD1-A440E/E-40,  
NSTL4-3B/L-2B,  
NSTL4-3L/L-1B,  
NDT Notification No-005837

This QA Inspector performed randomly Visual Inspection Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6027 (UT) report for this date. The member is identified as North tower lift 4 D/E corner seam (Except double diaphragm) from inside. The weld designations reviewed are as follows.

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NSTL4-3B/L-2B,  
NSTL4-3L/L-1B,  
NDT Notification No-005837

### BAY 10

This QA Inspector performed randomly Visual Inspection Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6027 (UT) report for this date. The member is identified as West tower lift 4, 131M Diaphragm backfill plate. The weld designations reviewed are as follows.

WSTL4-2H/L-52, 119  
NDT Notification No-005838

This QA Inspector observed the following work in progress:

### BAY 11:

#### SMAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040704, 251194. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ED1-STSA4-5-143M-1-29, 30, 41, 42, 31, 32, 43, 44. ZPMC QC Identified as Mao Bin Bin, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2113.

This QA Inspector observed ZPMC qualified welding personnel identified as 046709. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ND1-STSA4-6-143M-2-25, 26, 31, 32. ZPMC QC Identified as Mao Bin Bin, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2113.

This QA Inspector observed ZPMC qualified welding personnel identified as 040656, 046769. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ED1-STSA4-6-135M-2-83, 79. ZPMC QC Identified as Mao Bin Bin, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2113.

This QA Inspector observed ZPMC qualified welding personnel identified as 040656, 046769. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ED1-STSA4-6-135M-2-84, 80. ZPMC QC Identified as Mao Bin Bin, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-4113-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 202100. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ED1-STSA4-6-135M-1-87, 88, 23, 24, 27, 28. ZPMC QC Identified as Mao Bin Bin, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2112.

This QA Inspector observed ZPMC qualified welding personnel identified as 040619. Perform Shielded Metal Arc

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Welding (SMAW) on Tower Strut. Joint identified as WD1-STSA4-5-139M-1-47A. ZPMC QC Identified as Liu Dao Feng, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3212-Tc-U5b-1.

### Repair Welding

This QA Inspector observed ZPMC qualified welding personnel identified as 044541, Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ED1-STSA4-6-139M-1-10A/B. ZPMC QC Identified as Mao Bin Bin with temporary welding repair report WRR-T-WR3261, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-1G(1F)-Repair-1. For more information see below attach photo number 1.

### SAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 044550, 042195. Perform Submerged Arc Welding (SAW) on Saddle grillage plate. Joint identified as GTSA5-B/G-6A, 3A, ZPMC QC Identified as Shao Hao Long, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2221-B-U3c-S-2.

### Repair Welding

This QA Inspector observed ZPMC qualified welding personnel identified as 040581, 040268, Perform Shielded Metal Arc Welding (SMAW) on Shear Plate. Plate identified as ED1-A27. ZPMC CWI Identified as You Qi Guo, with temporary welding repair report. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-1G, 2G, 3G (1F, 2F, 3F)-Repair.

### BAY 10

#### Repair Welding, SMAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 202100, Perform Shielded Metal Arc Welding (SMAW) on Angle connection plate. Required build up 5mm on hole area. Joint identified as ED1-SA250-23M-1. ZPMC QC Identified as Mao Bin Bin with Critical welding repair report CWR-T-CWR630. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-485-SMAW-1G (1F)-Repair-1. For more information see below attach photo number 2.

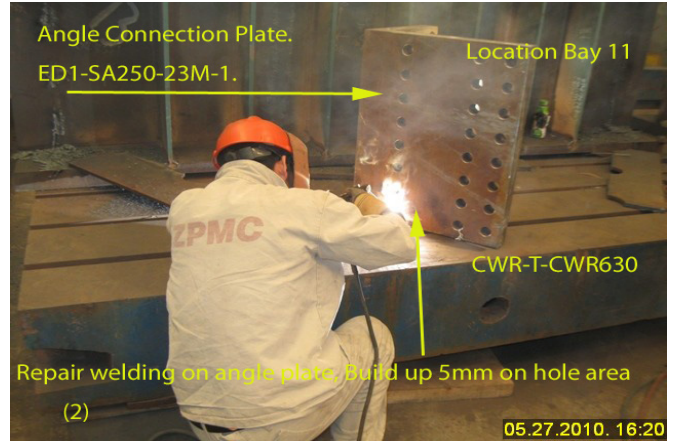
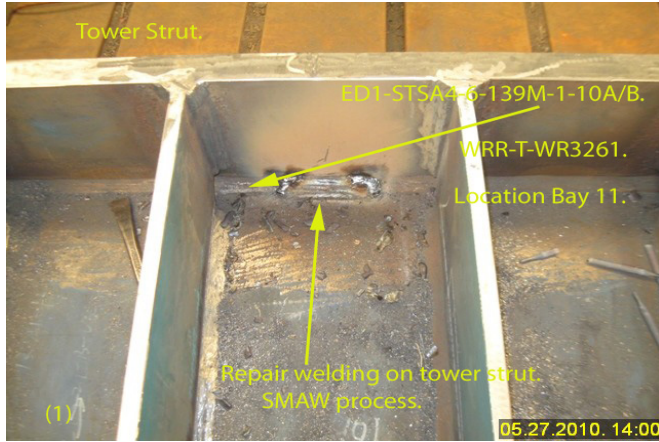
Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.

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## Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Skyler Guest phone: 15000422360, who represents the Office of Structural Materials for your project.

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**Inspected By:** Gaikwad,Shailesh

Quality Assurance Inspector

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**Reviewed By:** Clifford,William

QA Reviewer